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Application No.: 10/600,879

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AMENDMENTS TO THE DRAWINGS

Please replace FIG. 1 with the replacement sheet enclosed with this Amendment.

REMARKS

This is in response to the Office Action dated February 3, 2005 in which claims 1-20 were rejected. With this Amendment, claims 1, 12-14, 16, and 19 are amended. Claims 1-20 are pending in this application.

Amendment to the Title

With this Amendment the title of the application has been amended to HARD DRIVE ACTUATOR ARM HAVING A PAIR OF LINKS THAT PROVIDE FOR REDUCED SKEW VARIATION.

Amendment to the Drawings

Please replace FIG. 1 with the replacement sheet enclosed with this Amendment. As shown in the replacement sheet, FIG. 1 has been amended to include the words "Prior Art" as suggested in the Office Action.

Drawing Objections

In the Office Action, the drawings were objected to for not showing every feature of the invention specified in claims 8, 9, 15, and 16. Since each of these claims includes a "ball bearing joint" Applicant assumes that it is this feature of the claims to which the objection is directed.

It is respectfully submitted that this feature of the claims is adequately illustrated in the figures. In the specification at page 6, line 24 - page 7, line 5, the joints at each of the pivot axes of FIGS. 3-6 are specifically addressed. The specification states that "each link is ... connected ... to a slider mounting block by pivotally movable joints. In one embodiment, the joint at each pivot axis consists of a standard pin or ball bearing joint." These joints are represented by two concentric circles in the drawings at axes 48, 50, 54, 56, 64, 66, 70, and 72 in FIGS. 3-9.

It is sufficient in a nonprovisional patent drawing to represent features of the invention with a graphical drawing symbol where a detailed illustration is not essential for a proper understanding of the invention. See M.P.E.P. § 608.02(d), citing 37 CFR 1.83(a). Since FIGS. 3-9 contain a

graphical drawing symbol comprising two concentric circles representative of the various embodiments of the joints, including ball bearing joints, the objection to the drawings should be removed.

Claim Rejections - 35 U.S.C. § 112

In the Office Action, claims 1-20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, clarification of the relationship of the “link” feature of the claim to “drive link” and “guide link” was requested.

With this Amendment, independent claims 1, 12, and 19 have been amended to clarify this relationship. First, in claims 1, 12, and 19 the order that the elements are presented has been rearranged such that the actuator motor and all connections with the actuator motor are now recited after the linkage arm. In this way the claims have been amended to provide proper antecedent basis for each element of the claims.

Second, the term “link” has been amended to clarify the specific link rotated by the actuator motor. In claim 1, the term “link” has been amended to “drive link.” In claim 12, the term “link” has been amended to “one of the plurality of generally parallel links.” In claim 19, the term “link” has been amended to “first link.” Dependent claims 13, 14, and 16 that depend from amended independent claim 12 have been amended accordingly.

With these Amendments, the relationship between the features of claims 1-20 have been clarified. As a result, the rejection of claims 1-20 under 35 U.S.C. § 112 should be removed.

Claim Rejections - 35 U.S.C. § 102(b)

In the Office Action, claims 1-6, 11, 12, 13, and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by the Rohart Patent (U.S. Patent No. 4,751,596). Specifically, the Office Action stated that “the structure shown in Addendum A reads on and performs to the same degree as claimed.”

With this Amendment, independent claims 1 and 12 have been amended to clarify that the actuator motor is connected to the actuator block. The actuator block, as its name suggests, is involved in the actuation of the drive link through the connection with the actuator motor.

Amended independent claims 1 and 12 are allowable over the prior art of record. Claim 1 recites multiple connections with the actuator block. These connections include (1) the actuator motor connected to the actuator block, and (2) the guide link connected to the actuator block. Claim 12 also recites multiple connections with the actuator block. These connections include (1) the actuator motor connected to the actuator block, and (2) each link of the plurality of generally parallel links connected to the actuator block.

The Rohart patent does not disclose an actuator block that is both connected to the actuator motor and also connected to the “guide link” or “each link of the plurality of generally parallel links.” In Addendum A of the Office Action, fixed port 16 was labeled as the actuator block. However, Addendum A shows that fixed port 16 is not connected to an actuator motor as recited in the claims. Since there is no disclosure of an actuator block that is both connected to the actuator motor and also connected to a “guide link” or “each link of the plurality of generally parallel links,” as recited in independent claims 1 or 12, claims 1 and 12 are allowable over the Rohart patent.

In the Office Action, claims 1-6, 11, 12, 13, and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by the Japanese Patent Document (59-28216). Specifically, the Office Action stated that “the structure shown in Addendum B reads on and performs to the same degree as claimed.”

As described above, independent claims 1 and 12 recite a rotary actuator system including an actuator block that is both connected to the actuator motor and also connected to the “guide link” or “each link of the plurality of generally parallel links.”

In the Japanese Patent Document, there is no disclosure of a rotary actuator system including an actuator block that is both connected to the actuator motor and also connected to the “guide link” or “each link.” Addendum B shows that the part labeled actuator block 31 is not connected to motor 32. Since there is no disclosure of an actuator block that is both connected to the actuator motor and also connected to the “guide link” or “each link of the plurality of generally parallel links” as recited in independent claims 1 and 12 respectively, independent claims 1 and 12 are in condition for allowance.

Dependent claims 2-6, 11, 13, and 18 all depend from allowable independent claims 1 or 12, and are also allowable.

Claim Rejections - 35 U.S.C. § 103(a)

In the Office Action, claims 8, 9, 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Rohart patent or the Japanese Patent Document and further in view of the knowledge of one skilled in the art. Dependent claims 8-9 and 15-16 depend from independent claims 1 and 12 respectively, and are allowable therewith. In addition, the combinations of features recited in all of the dependent claims are patentable on their own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See M.P.E.P. § 2413.03 citing In re Fine, 5 U.S.P.Q. (BNA) 1596 (Fed. Cir. 1988).

Allowable Claims

Claims 7, 10, 14, and 17 were indicated to be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112 and to be rewritten in independent form. Based upon the reasons presented above, claims 7, 10, 14 and 17 are in condition for allowance with independent claims 1 or 12 from which they depend.

Claims 19 and 20 were indicated to be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. § 112. As described above, claim 19 has been amended to overcome this rejection. Therefore, claims 19 and 20 are in condition for allowance.

Conclusion

In view of the foregoing, this application containing pending claims 1-20 is in condition for allowance. Reconsideration and notice to that effect is respectfully requested.

Respectfully submitted,

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